

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

|   |   |  |
|---|---|--|
| Applicant's or agent's file reference<br><b>ABL-015-PCT</b> | <b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. |  |
| International application No.<br><b>PCT/BE 03/00194</b>     | International filing date (day/month/year)<br><b>07/11/2003</b>   | (Earliest) Priority Date (day/month/year)<br><b>08/11/2002</b> |
| Applicant<br><b>ABLYNX N.V.</b>                             |   |  |

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☒ furnished subsequently to this Authority in written form.

☒ furnished subsequently to this Authority in computer readable form.

☒ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☒ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☒ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

1  
☐ None of the figures.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/BE 03/00194

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K16/24 C07K16/28 C12N15/13

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, BIOSIS, MEDLINE, EMBASE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No.       |
|------------|---|-----------------------------|
| Y<br>D1    | WO 99/09055 A (INNOGENETICS NV ;SABLON ERWIN (BE); BUYSE MARIE ANGE (BE))<br>25 February 1999 (1999-02-25)<br>page 24, line 25-28<br>page 26, last paragraph -page 27,<br>paragraph 1   | 1-7, 11,<br>14-21,<br>25-49 |
| Y<br>02    | MUYLDERMANS S: "SINGLE DOMAIN CAMEL ANTIBODIES: CURRENT STATUS"<br>REVIEWS IN MOLECULAR BIOTECHNOLOGY,<br>ELSEVIER, AMSTERDAM,, NL,<br>vol. 74, no. 4, June 2001 (2001-06), pages<br>277-302, XP001057480<br>ISSN: 1389-0352<br>page 280, left-hand column, paragraph 1<br>-page 296, right-hand column, paragraph 1<br>page 296, right-hand column -page 297,<br>right-hand column, paragraph 1; table 1 | 1-3, 11,<br>14-21,<br>25-49 |
| Y          | -----<br>-/-  | 4-7                         |



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*Z\* document member of the same patent family

Date of the actual completion of the international search

5 May 2004

Date of mailing of the international search report

08/06/2004

Name and mailing address of the ISA

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Authorized officer

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/BE 03/00194

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|------------|--|-----------------------|
| A          | WO 90/10707 A (JONKER MARGREET ;MEIDE<br>PETRUS HENDRIKUS V D (NL))<br>20 September 1990 (1990-09-20)<br>page 3, paragraph 2<br>page 4, last paragraph -page 5, paragraph<br>1<br>---  | 8,12,13               |
| A          | WO 99/23221 A (HOWELL STEVEN ;UNILEVER PLC<br>(GB); LEDEBOER ADRIANUS MARINUS (NL);)<br>14 May 1999 (1999-05-14)<br>claim 10<br>---  | 9,10                  |
| A          | ELS CONRATH K ET AL: "Camel single-domain<br>antibodies as modular building units in<br>bispecific and bivalent antibody<br>constructs"<br>JOURNAL OF BIOLOGICAL CHEMISTRY, AMERICAN<br>SOCIETY OF BIOLOGICAL CHEMISTS, BALTIMORE,<br>MD, US,<br>vol. 276, no. 10,<br>9 March 2001 (2001-03-09), pages<br>7346-7350, XP002248402<br>ISSN: 0021-9258<br>the whole document<br>----- | 4-13                  |

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 22-24 (complete) and 25-26 and 39 (in part)

Present claims 22-24 (completely) and 25, 26 and 39 (in part) relate to an agent defined by reference to a desirable characteristic or property, namely, that it can be identified according to the methods of claims 18-20. The claims cover all agents having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and disclosure within the meaning of Article 5 PCT for none of such agents. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the agent by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search of the claimed scope impossible. Consequently, the search has not been carried out for those claims or parts thereof.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/BE 03/00194

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
Although claims 25, 27, 29, 31, 33, 35, 37 and 39 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☒ Claims Nos.: 22-24 (complete) and 25-26 and 39 (in part)  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/BE 03/00194

| Patent document<br>cited in search report |   | Publication<br>date | Patent family<br>member(s) | Publication<br>date |
|---|---|---------------------|----------------------------|---------------------|
| WO 9909055                                | A | 25-02-1999          | AU 9262598 A               | 08-03-1999          |
|   |   |                     | CA 2297692 A1              | 25-02-1999          |
|   |   |                     | WO 9909055 A2              | 25-02-1999          |
|   |   |                     | EP 1015480 A2              | 05-07-2000          |
|   |   |                     | US 2003099648 A1           | 29-05-2003          |
|   |   |                     | US 6350860 B1              | 26-02-2002          |
| <hr/>                                     |   |                     |                            |                     |
| WO 9010707                                | A | 20-09-1990          | AU 5263490 A               | 09-10-1990          |
|   |   |                     | CA 2011893 A1              | 09-09-1990          |
|   |   |                     | WO 9010707 A1              | 20-09-1990          |
|   |   |                     | EP 0387095 A1              | 12-09-1990          |
|   |   |                     | GB 2247837 A ,B            | 18-03-1992          |
|   |   |                     | JP 4505010 T               | 03-09-1992          |
|   |   |                     | ZA 9001854 A               | 27-11-1991          |
| <hr/>                                     |   |                     |                            |                     |
| WO 9923221                                | A | 14-05-1999          | AU 2152299 A               | 24-05-1999          |
|   |   |                     | BR 9813276 A               | 22-08-2000          |
|   |   |                     | CN 1278300 T               | 27-12-2000          |
|   |   |                     | WO 9923221 A2              | 14-05-1999          |
|   |   |                     | EP 1027439 A2              | 16-08-2000          |
|   |   |                     | US 2003092892 A1           | 15-05-2003          |
| <hr/>                                     |   |                     |                            |                     |